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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

EL CHANTI, HUSSEIN A

ART UNIT PAPER NUMBER

2157

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/846,380

Applicant(s)

KAMPE ET AL.

Examiner

Hussein A El-chanti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. This action is responsive to amendment received on Jan. 28, 2005. Claims 1-46 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka et al., U.S. patent No. 6,633,538 (referred to hereafter as Tanaka).

Tanaka teaches the invention explicitly as claimed including a system and method for managing network nodes by assigning a node as a master node and the remaining nodes as slave nodes (see abstract).

As to claims 1, 33, 36 and 41, Tanaka teaches a method, system and program for managing a plurality of high-availability-aware components in a networked computer system comprising:

registering the plurality of high-availability-aware components to be managed (see col. 5 lines 15-55, the IP addresses of the nodes are registered in a table); and

dynamically allocating roles and assignments to one or more of registered components of the plurality of high-availability-aware components to achieve a desired redundancy level based on component type information (see col. 6 lines 8-29, a master node is assigned and the remaining nodes are assigned as slave nodes).

As to claims 2, 31, 38 and 43, Tanaka teaches the method of claim 1, further comprising: providing information to the registered components so that related components among the registered components may communicate to achieve the desired redundancy level (see col. 6 lines 31-60).

As to claims 3 and 22, Tanaka teaches the method of claim 2, further comprising: maintaining software release domain information, wherein the software release domain information is provided to the related components during the providing step (see col. 6 lines 31-60).

As to claims 4, 23, 29, 39 and 44, Tanaka teaches the method of claim 1, further comprising: performing administrative actions on the registered components in response to a request from an external management agent (see col. 8 lines 13-38).

As to claims 5, 32, 37, 42 and 45, Tanaka teaches the method of claim 1, further comprising: responding to an error by changing roles and assignments of the registered components (see col. 6 lines 8-54).

As to claim 6, Tanaka teaches the method of claim 5, further comprising: maintaining component relationship information, wherein the component relationship

information is used during the allocating step and the responding step (see col. 6 lines 8-54).

As to claim 7, Tanaka teaches the method of claim 6, wherein the component relationship information includes assignment-level, component-level, and assignment-to-component relationships (see col. 6 lines 8-54).

As to claims 8 and 46, Tanaka teaches the method of claim 5, wherein the responding step uses protection group information (see col. 5 lines 8-35).

As to claim 9, Tanaka teaches the method of claim 5, wherein the responding step further comprises: choosing an appropriate response; and altering assignments and roles of the registered components according to the appropriate response (see col. 6 lines 14-61).

As to claim 10, Tanaka teaches the method of claim 9, wherein the appropriate response includes restart, fail-over, switch-over, node fail-over, and node switch-over (see col. 6 lines 14-61).

As to claim 11, Tanaka teaches the method of claim 1, wherein the roles allocated to the one or more of the registered components include off-line, spare, primary, secondary, and quiescing (see col. 6 lines 14-61).

As to claim 12, Tanaka teaches the method of claim 1, further comprising: maintaining component relationship information, wherein the component relationship information is used during the allocating step (see col. 6 lines 14-61).

As to claim 13, Tanaka teaches the method of claim 12, wherein the component relationship information includes assignment-level, component-level, and assignment-to-component relationships (see col. 6 lines 14-61).

As to claim 14, Tanaka teaches the method of claim 1, wherein the allocating step uses protection group information (see col. 5 lines 14-61).

As to claim 15, Tanaka teaches the method of claim 1, wherein the allocating step assigns a specific role and assignment to a self-determining component in the registered components (see col. 6 lines 14-61).

As to claim 16, Tanaka teaches the method of claim 1, wherein the plurality of high-availability-aware components include stand-alone components, proxied components, and proxy components (see col. 6 lines 14-61).

As to claim 17, Tanaka teaches the method of claim 1, wherein the component type information includes functional attributes, recovery parameter attributes, component instance level attributes, and component assignment level attributes (see col. 13 lines 20-60).

As to claims 18, 34 and 40, Tanaka teaches a method of allocating an assignment in a networked computer system comprising;

registering a plurality of components, wherein the plurality of components are high-availability aware (see col. 5 lines 5-54);

allocating roles to registered components of the plurality of components;
allocating the assignment to a first component selected from the registered components
based on component type information of the first component; changing a role of the first
component to primary (see col. 6 lines 5-54);

determining a redundancy level based on the component type information;
allocating the assignment to a predetermined number of secondary components
selected from the registered components based on component type information of the
secondary components, wherein the predetermined number is based on the
redundancy level (see col. 6 lines 5-54);

changing roles of the predetermined number of secondary components to
secondary (see col. 8 lines 5-54); and

notifying the first component about the predetermined number of secondary
components and the predetermined number of secondary components about the first
component (see col. 8 lines 5-54).

As to claims 19, 26 and 35, Tanaka teaches the method of claim 18, further
comprising:

detecting an error affecting the first component;

selecting a new primary component from the predetermined number of
secondary components; and

changing a role of the new primary component to primary (see col. 8 lines 10-35).

As to claims 20 and 27, Tanaka teaches the method of claim 19, further comprising: instructing the first component to communicate information to the new primary component (see col. 8 lines 11-50).

As to claim 21, Tanaka teaches the method of claim 18, further comprising: detecting an error affecting the first component; and restarting the first component (see col. 8 lines 11-50).

As to claims 24 and 28, Tanaka teaches the method of claim 18, further comprising: maintaining component relationship information; wherein the component relationship information is used in the two assignment allocating steps (see col. 6 lines 31-60).

As to claim 25, a method of allocating an assignment to a plurality of high-availability-aware components in a networked computer system, the method comprising: registering the plurality of high-availability-aware components; allocating roles to registered components of the plurality of high-availability-aware components; maintaining component relationship information; selecting a first component from the registered components based on component type information and the component relationship information; allocating the assignment to the first component; changing a role of the first component to primary; determining a redundancy level based on the component type information; selecting a predetermined number of secondary components from the registered components based on component type information of the secondary components and the component relationship information, wherein the

predetermined number is based on the determined redundancy level; changing roles of the predetermined number of secondary components to secondary; and notifying the first component about the predetermined number of secondary components and the predetermined number of secondary components about the first component (see col. 5 lines 5-col. 6 lines 50 and col. 8 lines 10-40).

As to claim 30, Tanaka teaches a computer program product for managing a plurality of high-availability-aware components in a networked computer system, the computer program product comprising: computer readable program code configured to register the plurality of high-availability-aware components to be managed; computer readable program code configured to dynamically allocate roles and assignments to one or more of registered components of the plurality of high-availability-aware components to achieve a desired redundancy level based on component type information; and a computer readable medium having the computer readable program codes embodied therein (see col. 5 lines 5-col. 6 lines 50 and col. 8 lines 10-40).

Response to Arguments

3. Applicant's arguments have been fully considered but they are not persuasive.

Applicant argues in substance that A) Tanaka does not disclose a high availability component B) Tanaka does not disclose registering components C) Tanaka does not disclose dynamically allocating roles.

In response to A) Tanaka teaches a system and method for managing network nodes by assigning a node as a master node and the remaining nodes as slave nodes (see abstract). Applicant defines the high availability component on page 2 of

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amendment received on Jan. 28, 2005 as “a component ... to behave as a unit of deployment, redundancy and manageability within a networked computer system”.

Tanaka teaches a network management system where system comprises a plurality of nodes; each node having an address management table and a monitoring list where the node monitors other nodes and therefore “manageability component” (see col. 5 lines 29-59). The system also comprises a master node a list of slave nodes where the slave nodes are replicas of the master node and where the slave node is capable changing its state to a master node in the case of detection of a node failure and achieving network “redundant” components (see col. 5 lines 29-49) and therefore Tanaka meets the scope of the claimed limitation “high availability component”.

In response to B) Tanaka teaches registering the addresses of the master and the slave nodes in a table where the table is stored on each and every one of the nodes (see col. 5 lines 29-49). There is no limitation on how the components are being registered and therefore Tanaka meets the scope of the claimed limitation “registering the plurality of high availability aware components”.

In response to C) Tanaka teaches assigning one of the nodes as a master node and the other nodes as slave nodes where in the case of detection of a failure of the master node, a slave node is dynamically allocated to take the role of the master node and the address tables are updated to include the new address of the master node (see col. 5 lines 29-49). There is no limitation in the claims on how the roles are being assigned and therefore the dynamic assignment of nodes as master and slave nodes

taught by Tanaka meets the scope of the claimed limitation "dynamically allocating roles of high availability aware components".

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A El-chanti whose telephone number is (571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein Elchanti

March 22, 2005



SALEH NAJJAR
PRIMARY EXAMINER